

Appl. No. 9/864,593
Amdt. Dated May 25, 2005
Reply to Office action of March 1, 2005
Attorney Docket No. P13556-US1
EUS/J/P/05-3123

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-7. (Canceled)

8. (Previously Presented) A network device for implementing Internet Protocol Security, comprising:

at least one IP forwarder arranged to receive IP packets, each IP packet being associated with a Security Association (SA), the at least one IP forwarder is further arranged to determine the destination of each IP packet and to forward each IP packet to its destination;

a plurality of security procedure modules coupled to the at least one IP forwarder and arranged to implement security procedures for received IP packets in parallel; and

a security controller arranged to allocate negotiated SAs among the security procedure modules and to notify the security procedure modules and the at least one IP forwarder of the allocation, whereby the at least one IP forwarder can send IP packets to the security procedure module implementing the associated SA.

9. (Previously Presented) A device according to claim 8, wherein the security procedure modules are coupled together to allow the forwarding of an IP packet from one security procedure module to another.

10. (Previously Presented) A device according to claim 8, wherein the security controller is responsible for creating and modifying IP packet filters in the at least one IP forwarder, and the filters are responsible for routing IP packets to the security procedure modules.

11. (Previously Presented) A device according to claim 10, wherein the filtering of packets is carried out using at least one selector, the at least one selector

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being the Security Parameter Index (SPI), which identifies a SA and which is contained in a header of the IP packets.

12. (Previously Presented) A device according to claim 8, wherein the security controller is coupled to an Internet Key Exchange (IKE) module which is responsible for negotiating SAs with peer IKE modules, and the security controller is arranged to receive from the IKE module details of negotiated SAs.

13. (Previously Presented) A device according to claim 8, wherein at least one of the at least one IP forwarder, security procedure modules, and security controller are implemented in at least one of software, hardware, and a combination of hardware and software.

14. (Previously Presented) A method of processing IP packets at a network device, the method comprising the steps of:

allocating negotiated Security Associations (SAs) among a plurality of security procedure modules arranged to implement security procedures for received IP packets;

notifying the security procedure modules and at least one IP forwarder of said allocation; and

receiving IP packets at the at least one IP forwarder, identifying the SAs associated with the packets, and forwarding the packets to the security procedure modules implementing the associated SAs.